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ABSTRACT

One problem in the assessment of personality characteristics is the lack of predictive power of scales across time and situations with respect to overt behavior. Items from two scales of the Edwards Personality Inventory (Articulate and Center of Attention) considered suitable for behavioral assessment, were found to have a relatively high rate of occurrence in small group activities common to young adults. Eight behavioral categories for the Center of Attention Scale and six categories for the Articulate scale were derived. Two groups of young adults (N=7 and N=8) were observed for a 30-minute discussion period and recordings were made using both sets of categories. Subjects also responded to the two inventory measures. Results indicated that the correlation between the behavioral measures and the inventory measures was .82 for Articulate and .86 for Center of Attention. Correlation between the two behavioral measures of the two traits was .40; correlation between the inventory measures was .51. The findings suggest that at least some personality traits can be reliably and convergently measured by both behavioral assessment techniques and traditional inventory scales. (Author/NRB)

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An Instance of Convergence of Behavioral Assessments and Inventory Measures of Traditionally Defined Traits

by

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Problem[1]

A longstanding problem in the assessment of personality characteristics is the lack of predictive power of such scales across time (Epstein, 1979) and situations (Bem & Allen, 1974) with respect to overt behaviors (Green, Burkhart & Harrison, 1979). In an extreme statement of this and related difficulties, Fiske (1979) has stated that " ... a science of the characterization of persons seems improbable" (p. 733) while the phenomena of behavior, on the other hand, appear to hold considerably greater promise for the development of one or more sciences. However, various studies (e.g., Scheier, Buss & Buss, 1978; Howard, Maxwell, Wiener, Boynton & Rooney, 1980) imply the convergence of inventory and behavioral measures of the same trait when both focus on the same manifest content.

The purposes of this study were: 1) to demonstrate that sets of observational categories could be derived for the assessment of behaviors linked to traditionally defined personality traits; 2) to show that the correlation between these assessments and inventory measurements of the same characteristics would be high, perhaps as high as the respective reliabilities would allow; and 3) that the correlations between the behavioral assessments of two different traits would be of the same order of magnitude as the correlation between the inventory scales.

Method

Scales. Because clinically important personality scales often consist

[1]Thanks are due to Victoria Dilley and Mary C. Jackson for their help in collecting data during the later phases of this study.

of clusters of dysfunctional responses rather goal-oriented behaviors from a single domain, the decision was made to use trait measures of "normal" personality variables. These trait measures were to be based upon an accepted conceptual framework (i.e., Murray's Needs) and constructed by procedures designed to eliminate response artifacts and to insure that in each case a single, relatively independent response domain was being tapped. The scales of the Edwards Personality Inventory and the Personality Research Form met these criteria and were evaluated with respect to their suitability for behavioral assessment.

Several criteria were used in judging suitability for behavioral assessment. The major considerations were: 1) frequent enough occurrences of scale items to allow the emergence of reliable individual differences within periods of observation of reasonable length; 2) traits with significance in day-to-day social interaction, preferably within small work groups; 3) scale items whose discrete occurrences could be judged with high interobserver agreement; 4) scales for which the occurrence of behaviors described by different items could be distinguished among with high interobserver agreement; 5) traits which might be expected to be exhibited with fairly high frequency in a wide variety of social interactions; and 6) traits involving behaviors that might be observed, quantified and recorded by means of standard techniques. In addition, more practical considerations included whether or not the behaviors associated with a given trait might be restricted to a very limited part of the total environment, the range of responses (gross motor, vocal, nonverbal, etc.) to be expected, and possible temporal clustering of responses by time of day or night.

The scales considered for inclusion in the study on these bases were: Center of Attention, Articulate, Critical of Others, and Talks about Himself from the EPI; and Affiliation and Exhibition from the PRF. Articulate and Center of Attention were selected. The items and their keying are given in Tables 1 and 2. A decisive factor was pilot observations which indicated the relatively high rate of occurrence of items from these scales in small group activities common to college students and young adults of a similar age.

Behavioral Categories

Center of Attention. Pilot work with small conversational and/or study groups of students in the university's student commons rooms led to the formation of a system of categories containing six common conversational behaviors (each of which could be modified in three ways), five less common behaviors, and a measure of the extent to which a subject dominated conversation during the observational period. Observational periods of one hour were attempted. Subjects were observed exclusively in rotation for five minute blocks of time.

Item analysis reduced these categories to eight: Comments, Comments Following a Request, Questions, Agree (or Disagree), Witty Comments, Animated, Loud, and Monopolizes Conversation. Animated and Loud became independent categories rather than descriptive adjuncts. The frequencies of occurrence of the eight categories were summed to obtain a total score. With reduction to eight categories, it became possible for a single observer to reliably record all such behaviors for groups of up to eight subjects and to obtain stable measures for these subjects in periods as short as ten to 15 minutes.

Articulate. By a similar process, six behavioral categories for Articulate

Table 1

Articulate (EPI)

6.	He has difficulty thinking of anything to talk about when he is introduced to a stranger.
22.	He would be very much upset if he were told that he had to give a short talk to a group on the spur of the moment.
37.	He has difficulty expressing himself clearly.
53.	He contributes more than his share to any group discussion.
68.	He has difficulty asking intelligent questions about things he doesn't understand.
84.	He can say what he wants to say without fumbling around for the right word.
99.	He has a good store of amusing jokes and stories that he tells well.
115.	He can summarize a discussion very well.
130.	He has difficulty expressing his opinions in a group.
146.	He expresses himself clearly and concisely.
161.	He would rather observe a group discussion than participate in it.
177.	He has difficulty doing his share to keep a conversation going.
192.	He has difficulty expressing himself before a group.
208.	He makes little impression on others in a group discussion.
223.	He can carry on a conversation with others even about things in which he has little interest.
239.	He likes to participate in group discussions.
254.	He can express his thoughts very well in talking to others.
270.	He finds it difficult to carry on a lengthy conversation about any single topic.
285.	He doesn't like to participate in the discussions of a large group.

[ ] = keyed False

Table 2

Center of Attention (EPI)

13. He often says he has to leave and then stays around for a good while before doing so.

27. He gets pleasure out of saying something that others regard as witty.

44. He frequently speaks louder than necessary.

58. He tells amusing stories at parties.

75. He enjoys playing practical jokes.

89. He likes to be the center of attention.

106. He tries to impress others by slightly exaggerating things that have happened to him.

120. He tends to interrupt others while they are talking to him.

137. He tends to monopolize a conversation.

151. He likes to do things in public that call attention to himself.

168. He is the sort of person who is not embarrassed by anything.

182. He is the sort of person who demands a great deal of attention from others.

199. He can make an interesting story out of something minor that happened to him.

213. He enjoys playing the role of the clown at a party.

[230.] He is rather quiet and reserved when with a group.

244. He likes to have people watch him do the things he knows he does well.

261. He likes to tell about embarrassing things that have happened to others.

[275.] He avoids doing anything in public that would call attention to himself.

292. He gives others the impression that he would do almost anything for a laugh.

[F] = keyed False

Table 3

Behavior Categories and Coding Rules for Center of Attention

I. Coding System

A. The primary coding system consists of six mutually exclusive categories descriptive of the type of verbal participation of the subject.

1) Comment (C): Self-initiated declarative statements (excluding comments which are responses to specific questions, witty comments, comments which repeat what another has said, and comments which express spontaneous agreement or disagreement with another).

2) Comment Following Request (CR): Comments which are in direct response to another's question or request for subject to speak.

3) Witty Comments (W): Comments which are followed by laughter by at least one person, including the subject himself.

4) Repeat (R): Comments identical to those of another, or comments which paraphrase another's without adding new information.

5) Questions (Q): Statements in the interrogative form.

6) Agree (Y): Spontaneous agreement or disagreement usually characterized by a single word such as "Yeah", "Right", "No", etc.

B. The following three categories may be double coded as a descriptive adjunct to the above when appropriate.

1) Interruptions: When a subject interrupts or cuts off another, the letter symbolizing the utterance is circled. e.g., (C).

2) (L): When an utterance(s) is louder than the group level, it is double coded with an L. e.g., C(L).

3) (A): When an utterance(s) is accompanied by animated hand gestures, the utterance is double coded with an A. e.g., W(A).

C. The following five behaviors are recorded if they occur during the course of the observation period.

1) Tells of others' embarrassment.

Table 3 (continued)

2) Practical jokes

3) Tells amusing stories

4) Says he has to leave and then stays

5) Exaggerates

II. Decision Rules

1. The observational unit is the block of utterances beginning from the subject's first sentence until he is either interrupted by another or is finished with the thought(s) he is expressing. This unit could range in length from one word (e.g., "Yeah", or "Right"), to a group of sentences several minutes in duration.

2. If verbal participation is in the form of a group of sentences, the first sentence determines the appropriate coding category (e.g., if a person emits a group of comments and ends with a question, the unit is coded "C").

III. Procedure

1. Observation periods are divided into five minute intervals during which all utterances of the preselected subjects are recorded in the manner described above.

2. Utterances by persons not being observed are not recorded. However, if a subject responds to a question asked by a non-subject, it is coded CR.

3. A tabulation is made of the person talking at the end of each one minute interval throughout the entire observation period in order to estimate the behavior of "monopolizes conversation".

were derived. The categories are:

1. Has difficulty expressing self.
2. Contributes more than his share to group discussion.
3. Expresses self clearly and concisely.
4. Says what he wants without fumbling for words.
5. Summarizes discussion.
6. Observes rather than participates.

The frequencies of occurrences of the six categories were summed to obtain a total score. As with Center of Attention, a single observer could reliably record all of these categories for groups of up to eight subjects and to obtain stable measures in periods of ten to 15 minutes.

Technical Data. Means and standard deviations of total scores on the two sets of behavioral categories, coefficient alphas, and stability estimates were obtained in observations of three groups: 1) a clinical psychology practicum group (n = 12); 2) the editorial staff of a campus newspaper (n = 7); and 3) a group of students participating in a Summer Quarter vocational planning workshop (n = 8). The practicum group was observed for two 30-minute periods on the same day; the editorial staff was observed for periods of 30, 10, and 25 minutes on successive occasions one week apart; and the vocational planning group was observed for two 30-minute periods separated by two weeks. These data are presented in Table 4.

Interrater reliability was estimated by finding the correlation between total frequencies in five categories (with totals greater than three units) of the Center of Attention schema from two observers recording over a 13-minute period. The value of r = .98.

Table 4

Technical Data

Group	Variable	Mean*	SD	Alpha	Stability
Practicum	Center of Attention	14.7	3.4	---	---
(n = 12)	Articulate	7.1	2.1	---	---
Editorial	Center of Attention	12.8	3.1	.85	.68
(n = 7)	Articulate	---	---	---	---
Vocational	Center of Attention	14.2	3.4	.80	.65
(n = 8)	Articulate	7.7	2.3	.76	.71

*All values prorated to a 30-minute observational period and averaged over the number of different observational periods.

Subjects. Two groups (n_1 = 7 and n_2 = 8) of young adults enrolled in a summer conservation program which included a weekly group discussion component were observed for a 30-minute period during one of the discussions. Recordings were made using both the Center of Attention and Articulate sets of categories. The members of both groups also responded to the two inventory measures, one group prior to the behavioral observations and the other subsequent to the observation.

Results

For the purposes of analysis, two groups were merged into a single set of observations. Because there were several extreme observations which tended to inflate the values of the correlations between variables, all scores were converted to ranks and rank-order correlations were computed.

The correlation between the behavioral measure and the inventory measure was .82 for Articulate and .86 for Center of Attention. The correlation between the two behavioral measures of the two traits was .40; the correlation between the inventory measures was .51.

It is worth noting that four individuals with the highest scores on both the behavioral and inventory versions of the Center of Attention scale were either group leaders or discussion moderators.

Conclusions

At least some personality traits can be reliably and convergently measured by both behavioral assessment techniques and traditional inventory scales. This implies the possibility of consistent behavioral characterizations of persons within traditional frameworks.

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